

Expandable slightly foamed styrene polymerizate particles of coarse cell structure, useful as insulating or packing materials

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Inventor(s): GLUECK GUISCARD [DE]; BATSCHEIDER KARL-HEINZ [DE]

Applicant(s): BASF AG [DE]

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Abstract of DE 19819058 (A1)

Expandable slightly foamed styrene polymerizate (ESP) particles have a coarse cell structure so that their bulk density is 0.1-20% lower than the initial bulk density of the unformed ESP particles. Independent claims are included for: (1) production of slightly foamed ESP particles by extrusion of a polystyrene melt containing a propellant in a water bath, cooling of the melt strand, and underwater granulation of the cooled strand.; The water bath is held at a temperature of 50-90 deg C and is optionally in a closed system in which the pressure is 2-20 bar; (2) production of slightly foamed ESP particles by suspension polymerization of styrene in the presence of a propellant at increased temperature and pressure, cooling to 60-90 deg C, and evaporation of the suspension; (3) production of slightly foamed ESP particles by mixing the particles with conventional coating agents in a mixing unit at a temperature of 60-90 deg C; (4) production of slightly foamed ESP particles by treatment of the particles with hot air or steam for 0.5-5 seconds at 60-100 deg C; (5) production of foamed ESP particles of coarse cell structure corresponding to a cell number of 1-6 cells per mm at a bulk density of 8-20 g/liter obtained as in (4) above.

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